

Applicant: Juha Maijala et al.
Application No.: 10/534,294
Response to Office action mailed Jul. 19, 2007
Response filed October 22, 2007

Remarks

Claims 7–17 remain pending in the application. In the Office action dated Jul. 19, 2007, claims 7–17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Arai et al. EP 982 120.

Claim 7–17 have been amended to require selecting a polymeric binder to be brought into contact with a roll or counter surface above the glass transition temperature of said selected polymeric binder. This limitation is not met by Arai et al., which rather teaches preventing contact of the polymeric binder with inorganic fine particles.

Arai et al., in the description directed to FIG. 2, discloses that *“On substrate 21 there is provided a porous and continuous resin layer 25 comprising particles of a powdery coating composition 22 and a substantially continuous film 24 composed of inorganic fine particles 23 and forming space between the particles of the powdery coating composition, while a portion of the inorganic fine particles 23 is exposed on the surface of the resin layer 25.”*

(¶[0066] page 7, lines 46-49) Arai et al. in the description directed to FIG. 4 discloses that *“On a substrate 41, each of the particles of the powdery coating composition 42 forms a porous and continuous resin layer 45 while a substantially continuous film 44 composed of the first inorganic fine particles 43 is interposed between the particles of the powdery coating composition to form space therebetween, and a portion of the first inorganic fine particles 43 is exposed on the surface of the resin layer 45. A surface layer 47 comprised of the second inorganic fine particles 46 is further formed on the resin layer 45.”* (¶[0099] page 11, lines 2-6) Thus, there are always inorganic particles between the powdery coating composition (resin) and the heated fixing roller 35 shown in FIG. 3. In other words, the powdery coating composition does not contact the roller 35 and, therefore, the powdery coating composition has no opportunity to adhere to the counter surfaces.

The present invention solves a problem of how to achieve a proper adhesion to a web and avoid sticking problems to counter surfaces. The present application specification sets forth the

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problem to be overcome "*On the other hand, the softened polymeric binder material must not adhere to counter surfaces with which it is in contact during the process.*" (See ¶ [0004].)

The inventors have found how to select the polymeric binder in order to solve the above-mentioned problems. The solution is that above the glass transition temperature T_g the ratio G''/G' is at the most equal to the ratio G''/G' at the glass transition temperature T_g .

FIG. 1 of the specification shows a polymeric binder which does not stick to counter surfaces, and FIG. 2 shows a polymeric binder which is prone to stick to counter surfaces. One should note that both polymeric binders have the same glass transition temperature.

In conclusion, Arai et al. does not suggest, or inherently contain, the claimed method steps of selecting a polymeric binder according to a selection criteria, i.e. having a loss factor at a temperature above the glass transition temperature, and in the rubbery state plateau is less than or equal to the loss factor at the glass transition temperature, and bringing a polymeric binder into contact with a counter surface heated above the characteristic glass transition temperature of the polymeric material wherein such contact does not produce adhesion to the counter surface. Therefore, the present invention is not obvious in the light of the prior art of record.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance. Favorable action thereon is respectfully solicited.

Respectfully submitted,



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